

Welcome to the Webinar!

Orientation and Onboarding for new site teams

Margaret Torn and the
AmeriFlux Management Project Team
Berkeley, California
October 13, 2021



- Introduction to AmeriFlux and AMP
- Community Panel
- Events and getting involved
- Data Support, Q&A
- Tech Support, Q&A
- Discussion

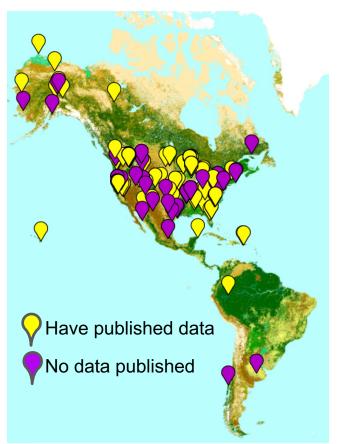




New AmeriFlux sites, 2017 – 2021

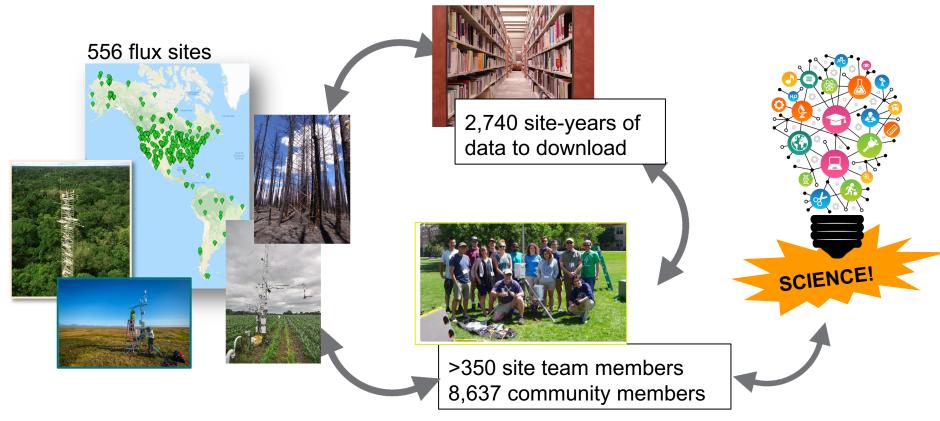
150 sites joined91 have published data

- Mexico
- ♣ Peru
- ♣ Puerto Rico
- **USA**



The AmeriFlux Network































WMO, NIST, NREL, Phenocam, and many more!

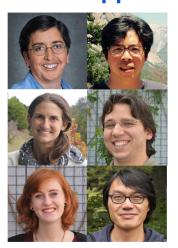




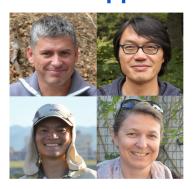
The AmeriFlux Management Project

ameriflux.lbl.gov/about/people/

Data QA/QC and Support



Tech QA/QC and Support



Outreach & Coordination



General Support and Core-site Support









Benefits of being part of AmeriFlux

- Community
 - Visibility and collaboration
 - High quality measurements
 - Data sharing and data credit





- Lisamarie Wyndham-Myers
 - Kathryn Ladig
 - Tim Griffis





Community member: Kathryn Ladig

- Utah Geological Survey
- Tower: US-UTW, US-UTB
- Remote sensing calibration
- https://ugs.easyfluxweb.com





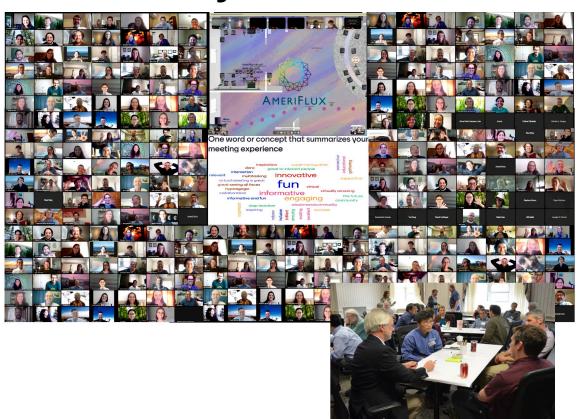


Community member: Tim Griffis





Community Events





Most years

- Annual Meeting
- AGU Town Hall
- Data-Tech Workshop
- Synthesis Workshop

This year is special

- Virtual Annual Meeting, Sept 20-22nd
- Hybrid AGU Fall Meeting Town Hall
- Webinars, monthly

Trevor Keenan





Theme Years for Network Action

2019-2020 2021-2022



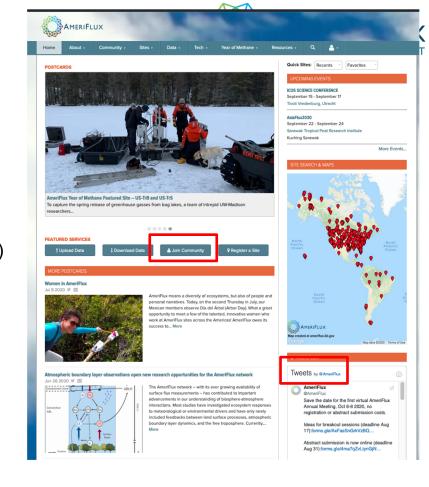


https://ameriflux.lbl.gov/year-of-methane/year-of-methane/

https://ameriflux.lbl.gov/year-of-water-fluxes/

Many ways to get involved!

- Join or contact AmeriFlux groups:
 - Data Advisory Committee (Bill Munger, chair)
 - Science Steering Committee (Marcy Litvak & Peter Thornton, co-chairs)
 - FLUXNET Early career network (Gabriela Shirkey, chair)
 - Urban Fluxes Committee (Sébastien Biraud)
 - Year of Water Fluxes Organizing Committee (WaterYear@lbl.gov)
 - Land-atmosphere interactions working group (Andrew Richardson, LandAtmosphere2021@gmail.com)
 - RUBISCO-AmeriFlux working group (Bill Riley, Trevor Keenan, Chi Chen, Zelalem Mekonen)
 - Diversity and Inclusion (Deb Agarwal, chair)



Upcoming Events and Opportunities



2021:

October 29: Year of Water Webinar: Soil water potential

November 2-4: ET Workshop: ET partitioning, modeling, remote sensing, measurements.

December 15: AGU Town Hall

https://ameriflux.lbl.gov/events/

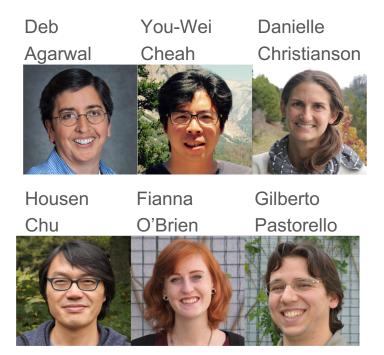
2022:

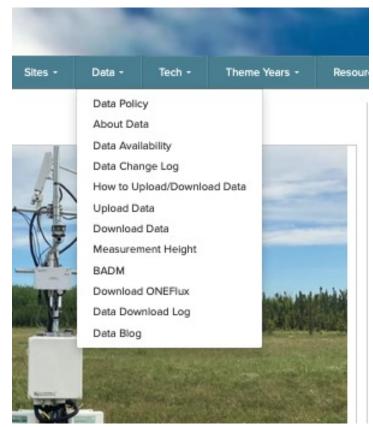
- Year of Water Flux: webinars, journals special issue, and more
- AmeriFlux webinars, workshops, working groups, Annual Meeting, AGU Town Hall
- FLUXNET Co-op: supporting flux scientists



Data Support







Contact us at ameriflux-support@lbl.gov

Data policy

- Let us know your data policy choice at registration
- Two policy choices:
 - Creative Commons License (CC-By-4.0)
 - Legacy
- CC-By-4.0 policy is a prerequisite for ONEFlux processing to generate FLUXNET product





Data Policy

AmeriFlux Data Use Policy AmeriFlux Data Contributor Policy

AmeriFlux Data Use Policy

The AmeriFlux Network data offered on this website are contributed by AmeriFlux scientists, who share their data openly with the global community. The AmeriFlux policy is that all data should be properly acknowledged by citting the data.

When you download the data, the Data Download portal will ask you to describe how you plan to use the data. This information is sent to the site Principal Investigators (PIs) and also posted to the AmeriFlux Data Download Log.

In August 2021, the AmeriFlux community moved to the AmeriFlux CC-BY-4.0 License. Most site Pls now share their sites' data under the CC-BY-4.0 license. Data for some sites are shared under the historical AmeriFlux data-sharing policy, now called the AmeriFlux Legacy Data Policy.

Researchers using data that are available under the AmeriFlux CC-BY-4.0 License are free to follow any or all of the AmeriFlux Legacy Data Policy guidelines. If a project uses both CC-BY-4.0 and Legacy data, the AmeriFlux Legacy Data Policy must be followed for all AmeriFlux data used.

Policy 1. AmeriFlux CC-BY-4.0 License

Data shared under the CC-BY-4.0 license are available following the guidelines of the CC-BY-4.0 data usage license (Creative Commons by Attribution 4.0 International). The CC-BY-4.0 license specifies that the data user is free to Share (copy and redistribute the material in any medium or format) and/or Adapt (remix, transform, and build upon the material) for any purpose.

Data shared under the AmeriFlux CC-BY-4.0 License follow these attribution guidelines:

- For each AmeriFlux site used: Provide a citation to the site's data product that includes the data-product DOI
- Acknowledge the AmeriFlux data resource: Funding for the AmeriFlux data portal was provided by the U.S. Department of Energy Office of Science.

Note

Collaboration with data providers (AmeriFlux Pls) is not required under this CC-BY-4.0 license, but it can help avoid misinterpretation or other data issues and is appreciated by data providers. Regardless, it is recommended that data users inform data providers of forthcoming publications that use a site's data.

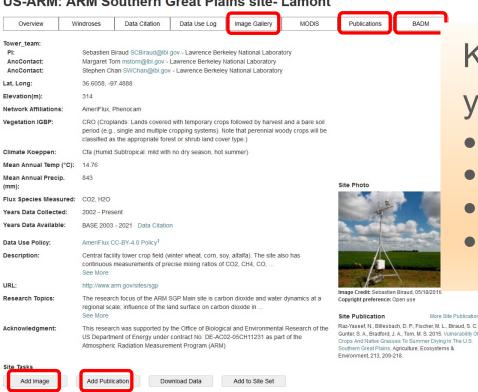
The required citation with DOI and an email list of AmeriFlux PIs for the downloaded sites is provided to the data user with the data download. This information is also accessible via each site's Site Info page (See Site Search)

Data about your site and team



US-ARM: ARM Southern Great Plains site- Lamont

Site Set | Select



Manage Site Sets

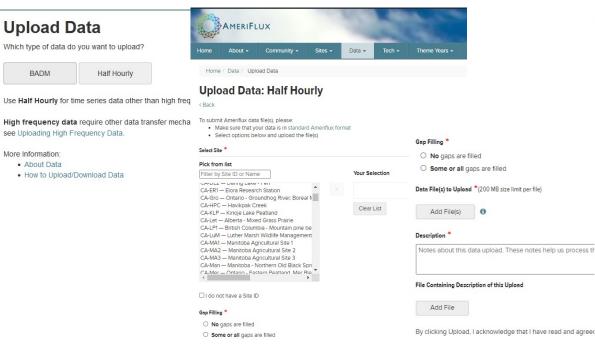
Keep information current for your sites!

Add images

More Site Publications

- Add publications
- **Update Site General Info**
- Update DOIs (after data is published)

Data submission 101



Data File(s) to Upload *(200 MB size limit per file)

Add File(s)



2. Data Variable: Base names

Base names indicate fundamental quantities that are either measured or calculated / derived. They can also indicate quantified quality information.

Table 1 Base names for data variable labels Export to CSV & Name Description Units TIMEKEEPING TIMESTAMP START ISO timestamp start of averaging period (up to a 12-digit YYYYMMDDHHMM integer as specified by the data's temporal resolution) TIMESTAMP END ISO timestamp end of averaging period (up to a 12-digit YYYYMMDDHHMM integer as specified by the data's temporal resolution) AQUATIC COND WATER Conductivity (i.e., electrical conductivity) of water µS cm-1 DO Dissolved oxygen in water µmol L-1 PCH4 Dissolved methane (CH4) in water nmolCH4 mol-1 PCO₂ Dissolved carbon dioxide (CO2) in water umolCO2 mol-1 PN2O Dissolved nitrous oxide (N2O) in water nmolN2O mol-1 PPFD UW IN Photosynthetic photon flux density, underwater, incoming µmolPhotons m-2 s-1 TW Water temperature dea C BIOLOGICAL DBH Diameter of tree measured at breast height (1.3m) with cm continuous dendrometers LEAF WET Leaf wetness, range 0-100 96 SAP DT Difference of probes temperature for sapflow deg C measurements SAP_FLOW Sap flow mmolH2O m-2 s-1 T BOLE Bole temperature dea C T CANOPY Temperature of the canopy and/or surface underneath the sensor

If you have questions, please contact us at ameriflux-support@lbl.gov. For more information see About Data and How to Upload/Download Data

Clear All Files

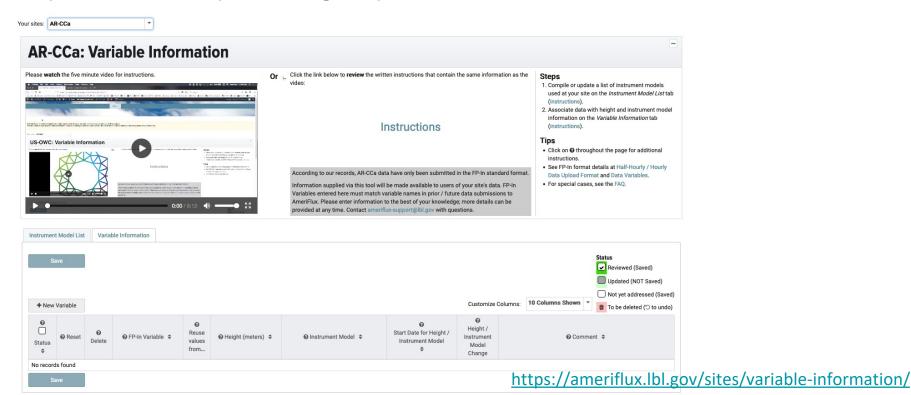
https://ameriflux.lbl.gov/half-hourly-hourly-data-upload-format/

https://ameriflux.lbl.gov/data/upload-data/

With flux/met submission: Variable Information

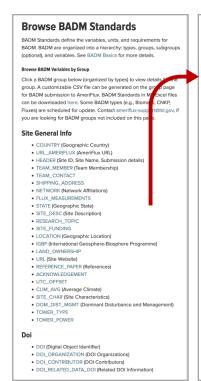
AMERIFLUX

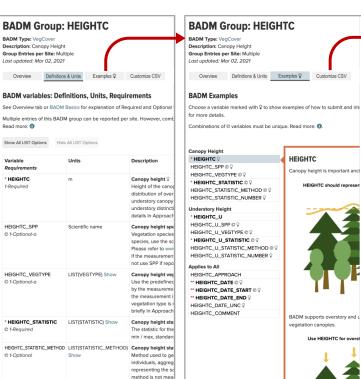
Important for data processing; required for ONEFlux!



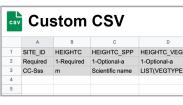


Other BADM templates





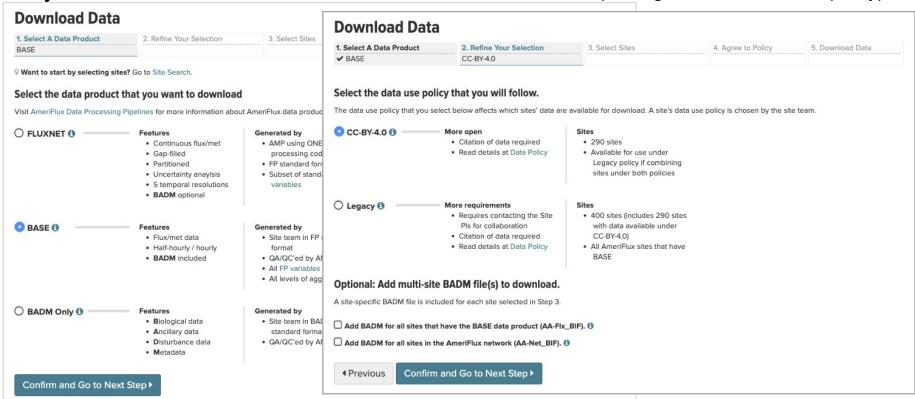




After your flux data are published...



Anyone with an AmeriFlux account can download data (with agreement to the data policy)



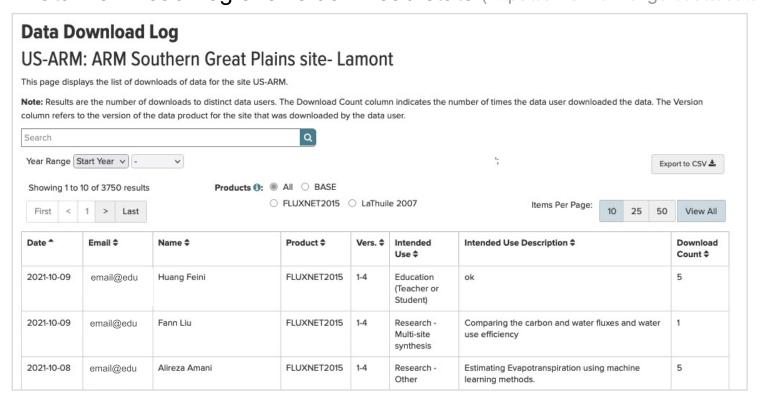
https://ameriflux.lbl.gov/data/download-data/

Download statistics are provided



Site Pls receive an email for every download

Data Download Log shows download stats (https://ameriflux.lbl.gov/data/data-download-log/)



Tech Support



Sébastien Biraud

Stephen Chan





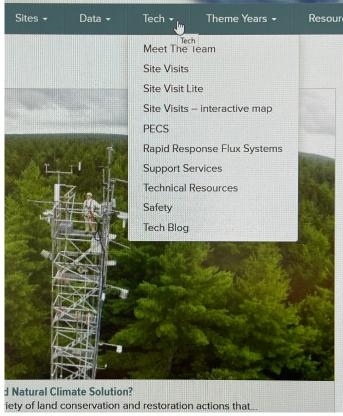
Chu

Dengel





Contact us at ameriflux-tech@lbl.gov



Visit us at https://ameriflux.lbl.gov/tech

Support by the AMP-Tech Team

AMERIFLUX
MANAGEMENT PROJECT

- IRGA calibration:
 - Span/Target Gas cylinders (CO₂ and CH₄)
 - Dew point generator (H₂O)
- Instrument Loaner Program:
 - PAR sensors
 - Gas analyzers (LI-COR / CSI)
 - Sonic anemometers (CSI / Gill / ATI)
- Portable Profile System
- Leaf area index sensor.

Request by email: ameriflux-tech@lbl.gov



https://ameriflux.lbl.gov/tech/support-services/

Rapid Response System (RRS)



Loan up to three years. Eddy covariance + meteorological sensors

Response to ecosystem disturbance or special opportunities:

- Deployed at US-CdM in June 2019
- Upcoming deployment at US-Me2 in Fall 2021
- Three systems available Fall 2021

NEW! EC in Urban environments:

- Two systems available Fall 2021
- https://ameriflux.lbl.gov/resources/reports/





To Apply visit: https://ameriflux.lbl.gov/resources/rapid-response-flux-systems

Year of Water Instrumentation



- 1. **Augment** quantity and quality of **water-related measurements** at <u>US-based AmeriFlux</u> sites with a focus on soil water content, soil water potential, water-table depth, and total precipitation.
- 2. Generate **Soil Water retention curves for 40-50 Ameriflux sites** (including non-US based sites) in partnership with U. of Indiana (Kim Novick & Rich Phillips).

Collect high-quality data





1/ Request a site visit Lite at Your site:

- Focuses on data processing
- Contact us: <u>ameriflux-tech@lbl.gov</u>

2/ Visit AmeriFlux website Tech pages:

- Watch past and attend new Webinars
 (https://ameriflux.lbl.gov/community/amp-webinar-series/)
- Resource page: <u>https://ameriflux.lbl.gov/tech/technical-resources/</u>
- Read Tech Blogs: https://ameriflux.lbl.gov/category/tech/

3/ Participate in Site Visit 2.0 through Ambassador/local rep initiative in 2022



Time for Discussion

- Get to know each other
- Peer networking
- Safety



Thank you for joining this webinar for new site teams!

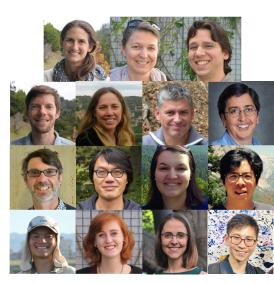
We'd love to hear from you:

Technical support: ameriflux-tech@lbl.gov

Data support: ameriflux-support@lbl.gov

Get involved: ameriflux@lbl.gov









END OF WEBINAR



Review previous webinars

- AMERIFLUX MANAGEMENT PROJECT
- Requirements for processing a site using ONEFlux (Oct 2020)
- DOI authorship form and data policy (Nov 2020)
- Post-submission data life-cycle (Jan 2021)
- Submitting BADM in CSV format (Mar 2021)

Contact us at ameriflux-support@lbl.gov





1. Introduction, What is ameriflux, What is the ameriflux management project

timing

- 10 min (including starting a few minutes late)
- 2. Community panel 10 min (formally 6 minutes)
- 3. Community 5 min
- 4. Technical support 10 min, including Q&A
- 5. Data support 10 min, including Q&A
- 6. Breakouts or plenary 15 min



556 sites have joined 1991-present

